



#1

SEQUENCE LISTING

<110> The University of British Columbia; and  
Chemokine Therapeutics Corporation

<120> CXCR4 ANTAGONIST TREATMENT OF HEMATOPOIETIC CELLS

<130> 80021-257

<140> US 09/852,424

<141> 2001-05-09

<150> CA 2,305,787

<151> 2000-05-09

<150> US 60/205,467

<151> 2000-05-19

<160> 135

<170> PatentIn Ver. 2.0

<210> 1

<211> 67

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 1

Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Val Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn Thr Pro  
20 25 30

Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn Arg Gln  
35 40 45

Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys  
50 55 60

Ala Leu Asn  
65

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<211> 67

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 2  
Lys Gly Val Ser Pro Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Val Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn Thr Pro  
20 25 30

Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn Arg Gln  
35 40 45

Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys  
50 55 60

Ala Leu Asn  
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<210> 3

<211> 67

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 3  
Lys Gly Val Ser Leu Pro Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Val Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn Thr Pro  
20 25 30

Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn Arg Gln  
35 40 45

Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys  
50 55 60

Ala Leu Asn  
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<210> 4

<211> 67

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 4  
Lys Gly Val Ser Leu Ser Pro Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Val Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn Thr Pro

20

25

30

Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn Arg Gln  
35 40 45

Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys  
50 55 60

Ala Leu Asn  
65

<210> 5  
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Laboratory

<400> 5  
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His Val Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn Thr Pro  
20 25 30

Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn Arg Gln  
35 40 45

Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys  
50 55 60

Ala Leu Asn  
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<210> 6  
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<220>  
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<222> (5)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of  
disclosure for possible structures for P\*

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 6  
Lys Gly Val Ser Xaa Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Val Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn Thr Pro  
20 25 30

Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn Arg Gln  
35 40 45

Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys  
50 55 60

Ala Leu Asn  
65

<210> 7  
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disclosure for possible structures for P\*

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<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 7  
Lys Gly Val Ser Leu Xaa Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Val Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn Thr Pro  
20 25 30

Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn Arg Gln  
35 40 45

Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys  
50 55 60

Ala Leu Asn  
65

<210> 8  
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<220>  
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<223> Xaa=P\*=proline-amino acid chimera. See page 17 of  
disclosure for possible structures for P\*

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 8  
Lys Gly Val Ser Leu Ser Xaa Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15  
  
His Val Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn Thr Pro  
20 25 30  
  
Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn Arg Gln  
35 40 45  
  
Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys  
50 55 60  
  
Ala Leu Asn  
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<210> 9  
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<220>  
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<223> Xaa=P\*=proline-amino acid chimera. See page 17 of  
disclosure for possible structures for P\*

<220>  
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Laboratory

<400> 9  
Lys Gly Val Ser Leu Ser Tyr Xaa Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15  
  
His Val Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn Thr Pro  
20 25 30  
  
Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn Arg Gln  
35 40 45  
  
Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys  
50 55 60  
  
Ala Leu Asn  
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<210> 10  
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<220>  
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<222> (5)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 10  
Lys Gly Val Ser Xaa Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser His  
1 5 10 15

Val Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn Thr Pro Asn  
20 25 30

Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn Arg Gln Val  
35 40 45

Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
50 55 60

Leu Asn  
65

<210> 11  
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<212> PRT  
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<220>  
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<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 11  
Lys Gly Val Ser Leu Xaa Arg Cys Pro Cys Arg Phe Phe Glu Ser His  
1 5 10 15

Val Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn Thr Pro Asn  
20 25 30

Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn Arg Gln Val  
35 40 45

Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
50 55 60

Leu Asn  
65

<210> 12  
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<220>  
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<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 12  
Lys Gly Val Ser Leu Ser Xaa Cys Pro Cys Arg Phe Phe Glu Ser His  
1 5 10 15  
  
Val Ala Arg Ala Asn Val Lys His Leu Lys Ile Leu Asn Thr Pro Asn  
20 25 30  
  
Cys Ala Leu Gln Ile Val Ala Arg Leu Lys Asn Asn Asn Arg Gln Val  
35 40 45  
  
Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
50 55 60  
  
Leu Asn  
65

<210> 13  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 13  
Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
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His

<210> 14  
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 14  
Lys Gly Val Ser Leu Ser Tyr Arg Cys  
1 5

<210> 15  
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<222> (9)  
<223> dimer of amino acids 1-9 in which the amino acid  
chains are joined by a disulphide bond between  
each of the cysteines at position 9 in each  
sequence.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory (SDF-1 (1-9)2 [P2G])

<400> 15  
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1 5

<210> 16  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> VARIANT  
<222> (9)  
<223> Xaa-an amino acid like lysine; ornithine or any  
other natural or unnatural amino acid serving as a  
linker between each of the arginines at position 8  
in each of SEQ ID NOS 16 and 17.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory (SDF-1(1-8)2[P2G])

<400> 16  
Lys Gly Val Ser Leu Ser Tyr Arg Xaa  
1 5

<210> 17  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<220>  
<221> SITE  
<222> (8)  
<223> binds with residue at position 9 of SEQ ID NO 16

<400> 17  
Lys Pro Val Ser Leu Ser Tyr Arg  
1 5

<210> 18  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 18  
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1 5 10 15

His

<210> 19  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 19  
Lys Gly Val Ser Leu Pro Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His

<210> 20  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 20  
Lys Gly Val Ser Leu Ser Pro Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His

<210> 21  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 21  
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1 5 10 15

His

<210> 22  
<211> 17  
<212> PRT  
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<220>  
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<222> (5)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of  
disclosure for possible structures for P\*

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 22  
Lys Gly Val Ser Xaa Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His

<210> 23  
<211> 17  
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<213> Artificial Sequence

<220>  
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<222> (6)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of

disclosure for possible structures for P\*

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 23

Lys Gly Val Ser Leu Xaa Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His

<210> 24

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<221> MUTAGEN

<222> (7)

<223> Xaa=P\*=proline-amino acid chimera. See page 17 of  
disclosure for possible structures for P\*

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 24

Lys Gly Val Ser Leu Ser Xaa Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His

<210> 25

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

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<222> (8)

<223> Xaa=P\*=proline-amino acid chimera. See page 17 of  
disclosure for possible structures for P\*

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 25

Lys Gly Val Ser Leu Ser Tyr Xaa Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His

<210> 26  
<211> 16  
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<220>  
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<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 26  
Lys Gly Val Ser Xaa Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser His  
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<210> 27  
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<220>  
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<222> (6)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 27  
Lys Gly Val Ser Leu Xaa Arg Cys Pro Cys Arg Phe Phe Glu Ser His  
1 5 10 15

<210> 28  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
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<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 28  
Lys Gly Val Ser Leu Ser Xaa Cys Pro Cys Arg Phe Phe Glu Ser His  
1 5 10 15

<210> 29  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 29  
Lys Gly Val Ser Pro Ser Tyr Arg Cys  
1 5

<210> 30  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Engineered in  
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<400> 30  
Lys Gly Val Ser Leu Pro Tyr Arg Cys  
1 5

<210> 31  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 31  
Lys Gly Val Ser Leu Ser Pro Arg Cys  
1 5

<210> 32  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 32  
Lys Gly Val Ser Leu Ser Tyr Pro Cys  
1 5

<210> 33  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
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<222> (5)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 33  
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<210> 34  
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<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 34  
Lys Gly Val Ser Leu Xaa Tyr Arg Cys  
1 5

<210> 35  
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<212> PRT  
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<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

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Lys Gly Val Ser Leu Ser Xaa Arg Cys  
1 5

<210> 36  
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<220>  
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disclosure for possible structures for P\*

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 36  
Lys Gly Val Ser Leu Ser Tyr Xaa Cys  
1 5

<210> 37  
<211> 8  
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<222> (5)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of  
disclosure for possible structures for Btd

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 37  
Lys Gly Val Ser Xaa Tyr Arg Cys  
1 5

<210> 38  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (6)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of

disclosure for possible structures for Btd

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 38

Lys Gly Val Ser Leu Xaa Arg Cys  
1 5

<210> 39

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<221> MUTAGEN

<222> (7)

<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of  
disclosure for possible structures for Btd

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 39

Lys Gly Val Ser Leu Ser Xaa Cys  
1 5

<210> 40

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> DISULFID

<222> (9)

<223> dimer of amino acids 1-9 in which the amino acid  
chains are joined by a disulphide bond between  
each of the cysteines at position 9 in each  
sequence.

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 40

Lys Gly Val Ser Pro Ser Tyr Arg Cys  
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<210> 41

<211> 9

<212> PRT

<213> Artificial Sequence

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<223> dimer of amino acids 1-9 in which the amino acid chains are joined by a disulphide bond between each of the cysteines at position 9 in each sequence.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 41  
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<220>  
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<223> dimer of amino acids 1-9 in which the amino acid chains are joined by a disulphide bond between each of the cysteines at position 9 in each sequence.

<220>  
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<400> 42  
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1 5

<210> 43  
<211> 9  
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<223> dimer of amino acids 1-9 in which the amino acid chains are joined by a disulphide bond between each of the cysteines at position 9 in each sequence.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

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Lys Gly Val Ser Leu Ser Tyr Pro Cys  
1 5

<210> 44  
<211> 9  
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<220>  
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<222> (5)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DISULFID  
<222> (9)  
<223> dimer of amino acids 1-9 in which the amino acid chains are joined by a disulphide bond between each of the cysteines at position 9 in each sequence.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

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Lys Gly Val Ser Xaa Ser Tyr Arg Cys  
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<210> 45  
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<220>  
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<222> (6)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DISULFID  
<222> (9)  
<223> dimer of amino acids 1-9 in which the amino acid chains are joined by a disulphide bond between each of the cysteines at position 9 in each sequence.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 45

Lys Gly Val Ser Leu Xaa Tyr Arg Cys  
1 5

<210> 46  
<211> 9  
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<220>  
<221> MUTAGEN  
<222> (7)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DISULFID  
<222> (9)  
<223> dimer of amino acids 1-9 in which the amino acid chains are joined by a disulphide bond between each of the cysteines at position 9 in each sequence.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

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Lys Gly Val Ser Leu Ser Xaa Arg Cys  
1 5

<210> 47  
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<212> PRT  
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<220>  
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<222> (8)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DISULFID  
<222> (9)  
<223> dimer of amino acids 1-9 in which the amino acid chains are joined by a disulphide bond between each of the cysteines at position 9 in each sequence.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 47  
Lys Gly Val Ser Leu Ser Tyr Xaa Cys

<210> 48  
<211> 8  
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<213> Artificial Sequence

<220>  
<221> DISULFID  
<222> (8)  
<223> dimer of amino acids 1-8 in which the amino acid chains are joined by a disulphide bond between each of the cysteines at position 8 in each sequence.

<220>  
<221> MUTAGEN  
<222> (5)  
<223> Xaa-Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 48  
Lys Gly Val Ser Xaa Tyr Arg Cys  
1 5

<210> 49  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (6)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<221> DISULFID  
<222> (8)  
<223> dimer of amino acids 1-8 in which the amino acid chains are joined by a disulphide bond between each of the cysteines at position 8 in each sequence.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 49  
Lys Gly Val Ser Leu Xaa Arg Cys  
1 5

<210> 50  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (7)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<221> DISULFID  
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<223> dimer of amino acids 1-8 in which the amino acid chains are joined by a disulphide bond between each of the cysteines at position 8 in each sequence.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 50  
Lys Gly Val Ser Leu Ser Xaa Cys  
1 5

<210> 51  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (9)  
<223> Xaa-an amino acid like lysine; ornithine or any other natural or unnatural amino acid serving as a linker between each of the arginines at position 8 of SEQ ID NOS. 51 and 52.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 51  
Lys Gly Val Ser Pro Ser Tyr Arg Xaa  
1 5

<210> 52  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (8)  
<223> Binds to residue at position 9 of SEQ ID NO 51

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 52  
Lys Gly Val Ser Pro Ser Tyr Arg  
1 5

<210> 53  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (9)  
<223> Xaa=an amino acid like lysine; ornithine or any  
other natural or unnatural amino acid serving as a  
linker between each of the arginines at position 8  
of SEQ ID NOS. 53 and 54.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 53  
Lys Gly Val Ser Leu Pro Tyr Arg Xaa  
1 5

<210> 54  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (8)  
<223> binds to residue at position 9 of SEQ ID NO 53

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 54  
Lys Gly Val Ser Leu Pro Tyr Arg  
1 5

<210> 55  
<211> 9

<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (9)  
<223> Xaa=an amino acid like lysine; ornithine or any other natural or unnatural amino acid serving as a linker between each of the arginines at position 8 of SEQ ID NOs. 55 and 56.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 55  
Lys Gly Val Ser Leu Ser Pro Arg Xaa  
1 5

<210> 56  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (8)  
<223> binds to residue at position 9 in SEQ ID NO 55.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 56  
Lys Gly Val Ser Leu Ser Pro Arg  
1 5

<210> 57  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (9)  
<223> Xaa=an amino acid like lysine; ornithine or any other natural or unnatural amino acid serving as a linker between each of the prolines at position 8 in SEQ ID NOs. 57 and 58.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 57

Lys Gly Val Ser Leu Ser Tyr Pro Xaa  
1 5

<210> 58  
<211> 8  
<212> PRT  
<213> Artificial Sequence  
  
<220>  
<221> SITE  
<222> (8)  
<223> binds to residue at position 9 in SEQ ID NO 57.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 58  
Lys Gly Val Ser Leu Ser Tyr Pro  
1 5

<210> 59  
<211> 9  
<212> PRT  
<213> Artificial Sequence  
  
<220>  
<221> MUTAGEN  
<222> (5)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of  
disclosure for possible structures for P\*

<220>  
<221> MUTAGEN  
<222> (9)  
<223> Xaa=an amino acid like lysine; ornithine or any  
other natural or unnatural amino acid serving as a  
linker between each of the arginines at position 8  
of SEQ ID NOS. 59 and 60.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 59  
Lys Gly Val Ser Xaa Ser Tyr Arg Xaa  
1 5

<210> 60  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>

<221> MUTAGEN  
<222> (5)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> SITE  
<222> (8)  
<223> binds to residue at position 8 of SEQ ID NO. 59.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 60  
Lys Gly Val Ser Xaa Ser Tyr Arg  
1 5

<210> 61  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (6)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> MUTAGEN  
<222> (9)  
<223> Xaa=an amino acid like lysine; ornithine or any other natural or unnatural amino acid serving as a linker between each of the arginines at position 8 of SEQ ID NOS. 61 and 62.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 61  
Lys Gly Val Ser Leu Xaa Tyr Arg Xaa  
1 5

<210> 62  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (6)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> SITE  
<222> (8)  
<223> binds to residue at position 9 in SEQ ID NO 61.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 62  
Lys Gly Val Ser Leu Xaa Tyr Arg  
1 5

<210> 63  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (7)  
<223> Xaa=P\*-proline-amino acid chimera. See page 17 of  
disclosure for possible structures for P\*

<220>  
<221> MUTAGEN  
<222> (9)  
<223> Xaa=an amino acid like lysine; ornithine or any  
other natural or unnatural amino acid serving as a  
linker between each of the arginines at position 8  
of SEQ ID NOS. 63 and 64.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 63  
Lys Gly Val Ser Leu Ser Xaa Arg Xaa  
1 5

<210> 64  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (7)  
<223> Xaa=P\*-proline-amino acid chimera. See page 17 of  
disclosure for possible structures for P\*

<220>  
<221> SITE  
<222> (8)

<223> binds to residue at position 9 of SEQ ID NO 63.

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 64

Lys Gly Val Ser Leu Ser Xaa Arg  
1 5

<210> 65

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<221> MUTAGEN

<222> (8)

<223> Xaa=P\*=proline-amino acid chimera. See page 17 of  
disclosure for possible structures for P\*

<220>

<221> MUTAGEN

<222> (9)

<223> Xaa=an amino acid like lysine, ornithine or any  
other natural or unnatural amino acid serving as a  
linker between each of the proline-amino acid  
chimeras at position 8 of SEQ ID NOS. 65 and 66.

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 65

Lys Gly Val Ser Leu Ser Tyr Xaa Xaa  
1 5

<210> 66

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<221> MUTAGEN

<222> (8)

<223> Xaa=P\*=proline-amino acid chimera. See page 17 of  
disclosure for possible structures for P\*

<220>

<221> SITE

<222> (8)

<223> binds to residue at position 9 of SEQ ID NO 65.

<220>

<223> Description of Artificial Sequence: Engineered in

Laboratory

<400> 66  
Lys Gly Val Ser Leu Ser Tyr Xaa  
1 5

<210> 67  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (5)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<221> MUTAGEN  
<222> (8)  
<223> Xaa-an amino acid like lysine; ornithine or any other natural or unnatural amino acid serving as a linker between each of the arginines at position 7 of SEQ ID NOS. 67 and 68.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 67  
Lys Gly Val Ser Xaa Tyr Arg Xaa  
1 5

<210> 68  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (5)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See page 17 of disclosure for possible structures for Btd

<220>  
<221> SITE  
<222> (7)  
<223> binds to residue at position 8 on SEQ ID NO 67

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 68  
Lys Gly Val Ser Xaa Tyr Arg

<210> 69  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (6)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<221> MUTAGEN  
<222> (8)  
<223> Xaa=an amino acid like lysine; ornithine or any other natural or unnatural amino acid serving as a linker between each of the arginines at position 7 of SEQ ID NOS. 69 and 70.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 69  
Lys Gly Val Ser Leu Xaa Arg Xaa  
1 5

<210> 70  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (6)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<221> SITE  
<222> (7)  
<223> binds to position 8 of SEQ ID NO 69

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 70  
Lys Gly Val Ser Leu Xaa Arg  
1 5

<210> 71

<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (7)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<221> MUTAGEN  
<222> (8)  
<223> Xaa=an amino acid like lysine; ornithine or any other natural or unnatural amino acid serving as a linker between each of the Bicyclic Turned Dipeptides at position 7 of SEQ ID NOS 71 and 72.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 71  
Lys Gly Val Ser Leu Ser Xaa Xaa  
1 5

<210> 72  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (7)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<221> SITE  
<222> (7)  
<223> binds to residue at position 8 of SEQ ID NO 71

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 72  
Lys Gly Val Ser Leu Ser Xaa  
1 5

<210> 73  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 73  
Arg Phe Phe Glu Ser His  
1 5

<210> 74  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (15)..(18)  
<223> the number of glycines linking the N-terminal and  
C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 74  
Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15  
  
Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 75  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (18)..(21)  
<223> the number of glycines linking the N-terminal and  
C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 75  
Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15  
  
His Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
20 25 30  
  
Leu Asn

<210> 76  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (15)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 76  
Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Xaa Leu  
1 5 10 15

Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25

<210> 77  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (18)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 77  
Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Xaa Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 78  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (15)..(18)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 78  
Lys Gly Val Ser Pro Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 79

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<221> DOMAIN

<222> (15)..(18)

<223> The number of glycines linking the N- and  
C-terminal amino acids may be varied.

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 79

Lys Gly Val Ser Leu Pro Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 80

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<221> DOMAIN

<222> (15)..(18)

<223> The number of glycines linking the N- and  
C-terminal amino acids may be varied.

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 80

Lys Gly Val Ser Leu Ser Pro Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 81  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (15)..(18)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 81  
Lys Gly Val Ser Leu Ser Tyr Pro Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 82  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (18)..(21)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 82  
Lys Gly Val Ser Pro Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
20 25 30

Leu Asn

<210> 83  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (18)..(21)

<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>

<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 83

Lys Gly Val Ser Leu Pro Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
20 25 30

Leu Asn

<210> 84

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<221> DOMAIN

<222> (18)..(21)

<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>

<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 84

Lys Gly Val Ser Leu Ser Pro Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
20 25 30

Leu Asn

<210> 85

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<221> DOMAIN

<222> (18)..(21)

<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>

<223> Description of Artificial Sequence: Engineered in

Laboratory

<400> 85  
Lys Gly Val Ser Leu Ser Tyr Pro Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
20 25 30

Leu Asn

<210> 86  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (15)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 86  
Lys Gly Val Ser Pro Ser Tyr Arg Cys Pro Cys Arg Phe Phe Xaa Leu  
1 5 10 15  
  
Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25

<210> 87  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (15)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 87  
Lys Gly Val Ser Leu Pro Tyr Arg Cys Pro Cys Arg Phe Phe Xaa Leu  
1 5 10 15  
  
Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25

<210> 88  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (15)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 88  
Lys Gly Val Ser Leu Ser Pro Arg Cys Pro Cys Arg Phe Phe Xaa Leu  
1 5 10 15

Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25

<210> 89  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (15)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 89  
Lys Gly Val Ser Leu Ser Tyr Pro Cys Pro Cys Arg Phe Phe Xaa Leu  
1 5 10 15

Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25

<210> 90  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (18)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 90  
Lys Gly Val Ser Pro Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Xaa Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 91  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (18)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 91  
Lys Gly Val Ser Leu Pro Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Xaa Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 92  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (18)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 92  
Lys Gly Val Ser Leu Ser Pro Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Xaa Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 93  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (18)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 93  
Lys Gly Val Ser Leu Ser Tyr Pro Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15  
  
His Xaa Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 94  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (5)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of  
disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (15)..(18)  
<223> The number of glycines linking the N- and  
C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 94  
Lys Gly Val Ser Xaa Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15  
  
Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 95  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (6)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of  
disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (15)..(18)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 95  
Lys Gly Val Ser Leu Xaa Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 96  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (7)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (15)..(18)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 96  
Lys Gly Val Ser Leu Ser Xaa Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 97  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (8)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of

disclosure for possible structures for P\*

<220>

<221> DOMAIN

<222> (15)..(18)

<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>

<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 97

Lys Gly Val Ser Leu Ser Tyr Xaa Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 98

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<221> MUTAGEN

<222> (5)

<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>

<221> DOMAIN

<222> (18)..(21)

<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>

<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 98

Lys Gly Val Ser Xaa Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
20 25 30

Leu Asn

<210> 99

<211> 34

<212> PRT

<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (6)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (18)...(21)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 99  
Lys Gly Val Ser Leu Xaa Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Gly Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
20 25 30

Leu Asn

<210> 100  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (7)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (18)...(21)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 100  
Lys Gly Val Ser Leu Ser Xaa Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
20 25 30

Leu Asn

<210> 101  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (8)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (18)...(21)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 101  
Lys Gly Val Ser Leu Ser Tyr Xaa Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Gly Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
20 25 30

Leu Asn

<210> 102  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (5)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (15)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 102  
Lys Gly Val Ser Xaa Ser Tyr Arg Cys Pro Cys Arg Phe Phe Xaa Leu  
1 5 10 15

Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25

<210> 103  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (6)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (15)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 103  
Lys Gly Val Ser Leu Xaa Tyr Arg Cys Pro Cys Arg Phe Phe Xaa Leu  
1 5 10 15

Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25

<210> 104  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (7)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (15)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 104  
Lys Gly Val Ser Leu Ser Xaa Arg Cys Pro Cys Arg Phe Phe Xaa Leu  
1 5 10 15

Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25

<210> 105  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (8)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (15)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 105  
Lys Gly Val Ser Leu Ser Tyr Xaa Cys Pro Cys Arg Phe Phe Xaa Leu  
1 5 10 15

Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25

<210> 106  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (5)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (18)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 106  
Lys Gly Val Ser Xaa Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Xaa Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn

20

25

30

<210> 107  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (6)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (18)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 107  
Lys Gly Val Ser Leu Xaa Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Xaa Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 108  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (7)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (18)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 108  
Lys Gly Val Ser Leu Ser Xaa Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Xaa Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 109  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (8)  
<223> Xaa=P\*=proline-amino acid chimera. See page 17 of disclosure for possible structures for P\*

<220>  
<221> DOMAIN  
<222> (18)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 109  
Lys Gly Val Ser Leu Ser Tyr Xaa Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Xaa Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 110  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (5)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<221> DOMAIN  
<222> (14)...(17)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 110  
Lys Gly Val Ser Xaa Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly Gly  
1 5 10 15

Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 111  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (6)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<221> DOMAIN  
<222> (14)...(17)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 111  
Lys Gly Val Ser Leu Xaa Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 112  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (7)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<221> DOMAIN  
<222> (14)...(17)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 112  
Lys Gly Val Ser Leu Ser Xaa Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn

20

25

30

<210> 113  
<211> 33  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (5)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<221> DOMAIN  
<222> (17)...(20)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 113  
Lys Gly Val Ser Xaa Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser His  
1 5 10 15

Gly Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu  
20 25 30

Asn

<210> 114  
<211> 33  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (6)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of disclosure for possible structures for Btd

<220>  
<221> DOMAIN  
<222> (17)...(20)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 114

Lys Gly Val Ser Leu Xaa Arg Cys Pro Cys Arg Phe Phe Glu Ser His  
1 5 10 15

Gly Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu  
20 25 30

Asn

<210> 115  
<211> 33  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (7)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of  
disclosure for possible structures for Btd

<220>  
<221> DOMAIN  
<222> (17) .. (20)  
<223> The number of glycines linking the N- and  
C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 115  
Lys Gly Val Ser Leu Ser Xaa Cys Pro Cys Arg Phe Phe Glu Ser His  
1 5 10 15

Gly Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu  
20 25 30

Asn

<210> 116  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MUTAGEN  
<222> (5)  
<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of  
disclosure for possible structures for Btd

<220>  
<221> DOMAIN  
<222> (14)  
<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 116

Lys Gly Val Ser Xaa Tyr Arg Cys Pro Cys Arg Phe Phe Xaa Leu Lys  
1 5 10 15

Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25

<210> 117

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<221> MUTAGEN

<222> (6)

<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of  
disclosure for possible structures for Btd

<220>

<221> DOMAIN

<222> (14)

<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 117

Lys Gly Val Ser Leu Xaa Arg Cys Pro Cys Arg Phe Phe Xaa Leu Lys  
1 5 10 15

Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25

<210> 118

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<221> MUTAGEN

<222> (7)

<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of  
disclosure for possible structures for Btd

<220>

<221> DOMAIN

<222> (14)

<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 118

Lys Gly Val Ser Leu Ser Xaa Cys Pro Cys Arg Phe Phe Xaa Leu Lys  
1 5 10 15

Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25

<210> 119

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<221> MUTAGEN

<222> (5)

<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of  
disclosure for possible structures for Btd

<220>

<221> DOMAIN

<222> (17)

<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 119

Lys Gly Val Ser Xaa Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser His  
1 5 10 15

Xaa Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 120

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<221> MUTAGEN

<222> (6)

<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of  
disclosure for possible structures for Btd

<220>

<221> DOMAIN

<222> (17)

<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 120  
Lys Gly Val Ser Leu Xaa Arg Cys Pro Cys Arg Phe Phe Glu Ser His  
1 5 10 15

Xaa Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 121

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<221> MUTAGEN

<222> (7)

<223> Xaa=Btd=Bicyclic Turned Dipeptide. See Page 17 of  
disclosure for possible structures for Btd

<220>

<221> DOMAIN

<222> (17)

<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<400> 121

Lys Gly Val Ser Leu Ser Xaa Cys Pro Cys Arg Phe Phe Glu Ser His  
1 5 10 15

Xaa Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 122

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<220>

<221> DOMAIN

<222> (20)...(24)

<223> K20/E24 lactamization - domain cyclized

<400> 122

Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 123  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<220>  
<221> DOMAIN  
<222> (23)...(27)  
<223> K23/E27 lactamization - domain cyclized

<400> 123  
Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
20 25 30

Leu Asn

<210> 124  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Engineered in  
Laboratory

<220>  
<221> DOMAIN  
<222> (24)...(28)  
<223> E24/K28 lactamization - domain cyclized

<400> 124  
Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 125  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<220>

<221> DOMAIN

<222> (27)..(31)

<223> E27/K31 lactamization - domain cyclized

<400> 125

Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Glu Ser  
1 5 10 15

His Gly Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala  
20 25 30

Leu Asn

<210> 126

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<220>

<221> DOMAIN

<222> (15)..(18)

<223> The number of glycines linking the N- and C-  
terminal amino acids may be varied.

<400> 126

Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Gly Ser Lys Pro Gly Val Ile Phe Leu Thr Lys Arg Ser Arg Gln  
20 25 30

Val

<210> 127

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<221> DOMAIN

<222> (15)

<223> Xaa=CH<sub>2</sub> repeated n times where n=1 - 20 or more.

<220>

<223> Description of Artificial Sequence: Engineered in

Laboratory

<400> 127  
Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Xaa Ser  
1 5 10 15

Lys Pro Gly Val Ile Phe Leu Thr Lys Arg Ser Arg Gln Val  
20 25 30

<210> 128

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<220>

<221> DOMAIN

<222> (15)..(18)

<223> The number of glycines linking the N- and C-  
terminal amino acids may be varied.

<400> 128

Lys Gly Val Ser Leu Ser Arg Tyr Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Gly Glu Glu Trp Val Gln Lys Tyr Val Asp Asp Leu Glu Leu Ser  
20 25 30

Ala

<210> 129

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Engineered in  
Laboratory

<220>

<221> DOMAIN

<222> (15)

<223> Xaa=(CH<sub>2</sub>)<sub>n</sub> where n=1-20 or more.

<400> 129

Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Xaa Glu  
1 5 10 15

Glu Trp Val Gln Lys Tyr Val Asp Asp Leu Glu Leu Ser Ala  
20 25 30

<210> 130  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (9)  
<223> AMIDATION; acts as a linking moiety between each arginine at position 8 in each of SEQ ID 130 and SED ID 131.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 130  
Lys Gly Val Ser Leu Ser Tyr Arg Lys  
1 5

<210> 131  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> SITE  
<222> (8)  
<223> Binds to the residue at position 9 on SEQ ID NO 130.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 131  
Lys Gly Val Ser Leu Ser Tyr Arg  
1 5

<210> 132  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (9)  
<223> AMIDATION

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<220>

<221> DISULFID  
<222> (9)  
<223> dimer of amino acids 1-9 in which the amino acid chains are joined by a disulphide bond between each of the amidated cysteines at position 9 in each sequence.

<400> 132  
Lys Gly Val Ser Leu Ser Tyr Arg Cys  
1 5

<210> 133  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (31)  
<223> AMIDATION

<220>  
<221> DOMAIN  
<222> (15)..(18)  
<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>  
<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 133  
Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15  
Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 134  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> DOMAIN  
<222> (20)..(24)  
<223> K20/E24 Lactamization - domain cyclized

<220>  
<221> MOD\_RES  
<222> (31)  
<223> AMIDATION

<220>  
<221> DOMAIN

<222> (15)..(18)

<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>

<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 134

Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30

<210> 135

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<221> DOMAIN

<222> (24)..(28)

<223> K28/E24 Lactamization - domain cyclized

<220>

<221> MOD\_RES

<222> (31)

<223> AMIDATION

<220>

<221> DOMAIN

<222> (15)..(18)

<223> The number of glycines linking the N- and C-terminal amino acids may be varied.

<220>

<223> Description of Artificial Sequence: Engineered in Laboratory

<400> 135

Lys Gly Val Ser Leu Ser Tyr Arg Cys Pro Cys Arg Phe Phe Gly Gly  
1 5 10 15

Gly Gly Leu Lys Trp Ile Gln Glu Tyr Leu Glu Lys Ala Leu Asn  
20 25 30